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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,672	03/26/2001	Bryan W. Shirk	TRW (VSSIM) 4686-1	9811

7590 08/22/2002

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EXAMINER

LUM, LEE S

ART UNIT

PAPER NUMBER

3611

DATE MAILED: 08/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/817,672

Applicant(s)

SHIRK ET AL.

Examiner

Ms. Lee S. Lum

Art Unit

3611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Muller et al 6071998.

Muller discloses a vehicle component (Col 1, lines 15-21) comprising a biodegradable material,

the material including PHA (polyhydroxyalkanoate) resin (Col 4, lines 21-27),

And poly (3-hydroxybutyrate) (Col 4, lines 24-26).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2A. **Claims 3, 8 and 10-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller in view of Noda et al 5653930.

Re **Claims 3 and 13**, Muller does not disclose the component as made from a composite comprising a matrix of PHA with a biodegradable fiber, while Noda shows

In Col 4, lines 65-end (i.e., PHA), and,

in Col 6, lines 31-32, (i.e., cellulose material).

Art Unit: 3611

It would have been obvious to one with ordinary skill in the art at the time the invention was made to include biodegradable characteristics in the vehicle component, as shown in Noda, to aid in increased composting, thus minimize the lifespan and toxicity of landfills.

Re **Claim 8**, Muller discloses the polyhydroxyalkanoate resin as a poly (3-hydroxybutyrate) in Col 5, lines 15-18.

Re **Claims 10 and 11**, Muller does not specify PHA as in the form of fibers and bonded to form a fabric, while Noda shows the former in Col 6, lines 53-55, and fabric in Col 9, lines 2-4. It would have been obvious to one with ordinary skill in the art at the time the invention was made to form PHA in fibrous form, and into a fabric, as shown in Noda, and as is well-known in the art, to aid in forming/shaping the desired product.

Re **Claim 12**, Muller does not specify the PHA as PHBV, while Noda shows this feature in Col 4, line 39. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include another polymer of the PHA class, as shown in Noda, to produce certain desired characteristics in the finished product.

2B. **Claims 4-7 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller in view of Noda, and in further view of Hansen et al 5614570.

Re **Claims 4-6**, the previous patents do not specify that the biodegradable fiber comprises a plurality of continuous/discontinuous fibers, while Hansen states this fact in Col 5, lines 32-35.

Re **Claims 7 and 9**, the previous patents do not specify the biodegradable fiber as natural/synthetic, while Hansen specifies this feature in Cols 6-7, with emphasis on Col 7, lines 43-44. These characteristics are inherent in the particular materials.

2C. **Claims 14-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller in view of Willett et al 6054510.

Muller does not disclose the biodegradable material as comprising filler material, while Willett shows this element in Col 2, lines 62-63. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include filler material, as shown in Willett, for certain characteristics desired in the finished product, including minimization of sound.

2D. **Claims 17, 19, 32 and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wamez et al 5904367 in view of Muller et al 6071998.

Wamez discloses canister 24 and airbag 22, but does not state that either element is biodegradable. Muller discloses automotive components comprising PHA in (Col 4, lines 21-27). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include biodegradability in occupant protection components, as shown in Muller, to aid in composting in landfills, thus aiding in reducing volume in the same.

2E. **Claims 18, 20-30, 33-41 and 43-45** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wamez in view of Muller, and in further view of Noda and Hansen.

The combination of these references disclose the recited elements, for the rationale discussed in the previous paragraphs.

2F. **Claims 31 and 46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wamez in view of Muller, Noda, and Hansen, and in further view of Sinclair et al 5444113.

The previous patents do not disclose a Mullen burst specification, while Sinclair suggest that certain ranges of the Mullen strength and elastic modulus produce certain characteristics, in Col 8, lines 25-30. Although ranges of tensile strength is application-specific, it would have been obvious to one with ordinary skill in the art at the time the invention was made to include them, as shown in Sinclair, to suggest the scope of the invention.

Art Unit: 3611

3. The prior art made of record, and not relied upon, is pertinent to the Applicant's disclosure: Itoh et al 5804296, Karstens et al 5883025.

4. Communication with the Examiner and USPTO

Any inquiry concerning this communication should be directed to Ms. Lum at (703) 305-0232, 9-530, M-F. Our fax number is (703) 308-2571. Any inquiry of a general nature, or relating to the status of this application/proceeding should be directed to Customer Assistance at (703) 306-5771.

amBoll 8/19/02

ANNE MARIE BOEHLER
Primary Examiner

Ms. Lee S. Lum
Examiner
8/19/02

